

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

FEB 25 1981

BALLY MANUFACTURING CORPORATION,

Plaintiff,

v.

D. GOTTLIEB & CO.,
WILLIAMS ELECTRONICS, INC.,
and
ROCKWELL INTERNATIONAL CORPORATION,

Defendants.

DOCKETED

FEB 27 1981

H. STUART CUNNINGHAM
CLERK, U. S. DISTRICT COURT

CIVIL ACTION

NO. 78 C 2246

NOTICE OF MOTION

TO: DONALD L. WELSH, ESQ.
Fitch, Even, Tabin, Flannery & Welsh
135 South LaSalle Street
Chicago, Illinois 60603

PLEASE TAKE NOTICE that on Wednesday, February 25, 1981, at 2:00 P.M., or as soon thereafter as counsel may be heard, the undersigned shall appear before the Honorable John F. Grady, or any judge sitting in his stead, in the courtroom usually occupied by him at 219 South Dearborn Street, Chicago, Illinois, and then and there present the attached MOTION FOR SUMMARY JUDGMENT UNDER RULE 56 F.R.C.P. and supporting memorandum.

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D. Gottlieb & Co. and
Rockwell International Corporation

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MOTION FOR SUMMARY JUDGMENT UNDER RULE 56 F.R.C.P.

The defendants Williams Electronics, Inc., D. Gottlieb & Co. and Rockwell International Corporation hereby move this Honorable Court for entry of an order dismissing the complaint in this action.

A memorandum in support of this motion accompanies it. Briefly, however, this motion is made under the provisions of Rule 56 F.R.C.P. on the grounds that the plaintiff because of proceedings in the United States Patent and Trademark Office involving an application for the reissue of the patent in suit, and because the effect of those proceedings constitute an admission by the plaintiff that all of the claims of the patent in suit are invalid or that there is no genuine issue as to any material fact, and defendants are entitled to judgment as a matter of law.

This motion is directed only to the claims of the patent in suit and not to the claims of the reissue application now pending in the United States Patent and Trademark Office.

Respectfully submitted,

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MEMORANDUM ON MOTION FOR SUMMARY JUDGMENT

The Facts Of The Case

This is a suit for infringement of Patent No. 4,093,232 (Exhibit A). The action was commenced when the patent issued on June 6, 1978 assigned to the plaintiff, Bally.

The patent contains 55 claims and purports to cover the concept of a computer or data processor connected in a particular fashion to conventional pinball game elements to control the score indicators and the various lamps as the game is played. Fig. 1 of the patent shows such a conventional pinball game mounted in a conventional cabinet structure.

On August 25, 1978 Bally filed an application in the Patent and Trademark Office (the "PTO") to reissue the patent, in effect seeking a ruling from the PTO that certain prior art identified by the defendants did not, in the view of the PTO, render the claims of the patent unpatentable.

We will show that claims 1-55 of the patent in suit are invalid by reference to the record of proceedings in the PTO in connection with the reissue application. The claims now pending in that application are not in issue here and may never be until and unless a reissue patent containing them is granted by the PTO.

After certain procedural matters in this Court and in the PTO the examiner issued a first action on December 10, 1979. In that action (Exhibit B) the Examiner, inter alia, rejected claims 1-9, 11-27 and 29-55 under the provisions of 35 U.S.C. § 102(g)* on the basis of information (documents and depositions) supplied by the defendants in their role as protesters to the reissue.

The remaining claims, 10 and 28, were rejected under the provisions of 35 U.S.C. § 102(g) and Section 103

*35 U.S.C. § 102(g): A person shall be entitled to a patent unless before the applicant's invention thereof the invention was made in this country by another who had not abandoned, suppressed, or concealed it. In determining priority of invention there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.

as unpatentable because of the prior Atari work and submissions by the defendants.

In making these rejections the Examiner took the position that the invention as claimed had been made prior to the invention date of the Bally patentees by employees of Atari, Incorporated, a California based company.

Following further responses by Bally and the defendants and actions by the Examiner, the Examiner on November 29, 1980 once again rejected claims 1-9, 11-27 and 29-55 on the prior work of Atari (Exhibit C). However, in this action the Examiner took the position that, incredible as it may seem, if Bally were to amend their claims to recite specifically that the computer control was located in the conventional wooden box housing a pinball game the claims could be allowed (Exhibit C, p. 5). This, in the Examiner's mind, would distinguish over the prior Atari work as he had found it to be. That is, in the first stage of the Atari work the computer control was located externally to the pinball game cabinet in a laboratory type of computer control and connected to it by appropriate cabling.

On or about December 29, 1980 Bally responded to the Examiner's suggestions and so amended claims 1 through 39 (Exhibit D). At the same time Bally argued that because claims 40, 45 and 52 (the independent claims in the group 40-55) recite a "pinball game" in their preamble they are inherently limited to a "self-contained or

unitary structure housing the pinball and microprocessor control functions".

This argument bears some further comment. The preamble of claim 40 reads thus:

"A pinball game apparatus comprising:"

The preamble of claim 45 reads:

"A pinball game comprising a processor * * *."

Claim 52 reads:

"A pinball game comprising a digital processor * * *."

It was Bally's position that because these claims and the claims that depend on them so read they were significantly different from claims which would read:

"A game comprising, etc." or "A game apparatus comprising, etc."

On January 31, 1981 the Examiner then indicated (Exhibit E) that he held to his position that the Atari work was prior art under 35 U.S.C. § 102(g). At the same time he said that claims 1 through 39 with the amendment made earlier by Bally specifying a game housing and further specifying that the processor control and its connections to the conventional pinball elements were in the housing would be allowed. In that same communication the Examiner "acknowledged reissue applicants (Bally's) desire to construe the pinball claims to be drawn to a self-contained

or unitary structure housing the pinball and microprocessor control functions" and withdrew the rejection of patent claims 40-55 on the prior Atari work (Exhibit E, p. 5). As we will show, this action by the Examiner is a grievous error of law.

Bally then filed an amendment canceling the rejected claims in the reissue application and asked for prompt reissuance of the reissue patent (Exhibit F).

As the matter now stands, therefore, after two and one-half years in the PTO Bally has abandoned any claim to be the inventor of the subject matter of claims 1 through 39 of the patent.

With respect to claims 40 through 55 the same result obtains because Bally has chosen to attempt a reading of those claims as though they included everything in the housing which they say is not the case with the Atari prior work. Therefore, Bally has acquiesced in the Examiner's rejection of the original claims and the prior art and now seeks new claims which they contend distinguish from the prior art.*

*Those new claims, whether they be claims 1 through 39 as amended during the reissue process or claims 40 through 55 construed as Bally would have them construed, are not before this Court and may never be until and unless the reissue patent is granted by the PTO containing them. What is before the Court are claims 1 through 55 of the original patent, and these are invalid by Bally's own admission or acquiescence that Atari was the first to invent a pinball game controlled by a computer or data processor to light lights and control scoring using the particular interconnections called for by the claims.

Recapitulating:

1. Claims 1 to 55 issued in the original patent;
2. The defendants-protesters proved to the satisfaction of the PTO that those claims were invalid under the provisions of 35 U.S.C. § 102(g) because of the prior work of Atari;
3. Bally by amending claims 1 through 39 and arguing an implied limitation in claims 40 through 55 has acquiesced in or agreed to the correctness of this fact; and
4. Consequently Bally has abandoned any claim that Nutting and Frederiksen were the inventors of the subject matter of claims 1 through 39 of the patent in suit and claims 40-55 when construed in accordance with the law.

Argument

There are no genuine issues as to any material fact in this matter and defendants are entitled to a judgment as a matter of law (Rule 56(c) F.R.C.P.).

The plaintiff has admitted the prior art status of the Atari work by: (1) amending claims 1-39 of the patent in suit to "avoid" that prior art; and (2) arguing that claims 40-55 avoided that prior art because the word "pinball" in those claims should be construed to cover only a "self-contained or unitary structure housing

the pinball and microprocessor control functions" (Exhibit D, p. 19). With these actions plaintiff has agreed there is no genuine issue of material fact as to what was done by Atari prior to the work of Bally's patentees.

Consider first the amendment of Bally of claims 1-39 to specify the housing and the self-contained feature and the stated willingness of Bally to accept a reissued patent so limited (Exhibit F). Having taken this course Bally cannot now dispute the fact that Atari's engineers invented the subject matter of patent claims 1-39 prior to any date that can be claimed by its patentees.

Following the final action of the Examiner (Exhibit E) Bally could have had a review under the provisions of 35 U.S.C. § 134 by appeal to the PTO Board of Appeals. If unsuccessful there an appeal to the Court of Customs and Patent Appeals or to the United States District Court for the District of Columbia under 35 U.S.C. §§ 141 or 145 could have been had. Bally has not sought even to preserve their right to these reviews. Instead, they have acquiesced in the Examiner's holding and abandoned their original claims, including claims 40-55 properly construed.

In Ceco Corp. v. Bliss & Laughlin Industries, Inc., ___ F.Supp. ___, 186 U.S.P.Q. 114 (C.D. Ca. 1975) the patent owner amended the claims in a reissue application to avoid

prior art reference and the claims amended were those in the original patent in suit. The District Court found, 186 U.S.P.Q. at page 125, that:

"* * * Thus, defendant [the patent owner] has in effect admitted that the Cunningham claims in their present form do not properly and adequately distinguish the prior art upon which plaintiff relies."

On appeal, Ceco Corp. v. Bliss & Laughlin Industries, Inc., 557 F.2d 687 (9 Cir. 1977), the decision of the Trial Court was affirmed and at 557 F.2d, p. 691 the Court of Appeals referred to this amendment of claims in the reissue application as an acknowledgement of the "importance" of the prior art reference.

In Langdon v. Saltser & Weinsier, Inc., 288 F.2d 50 (2 Cir. 1961), at page 52 the Court held that an acknowledgement in a reissue application that a claim in the original patent was invalid is "tantamount to abandonment of the claim".

Whether the question is approached as one of abandonment, acquiescence or admission the result is the same. Bally by amending claims 1-39 after they were rejected by the PTO because of Atari's prior work cannot now contend those claims are valid or that the Atari work was not prior art.

Claims 40-55 are not really in any significantly different situation as Bally and the Examiner are not correct as a matter of law that a limitation not expressed can be read into these claims to save them.

Bally has conceded that the work of Atari was prior art but seek to preserve claims 40-55 for awhile longer by arguing that a claim which recites in its preamble "A pinball game" is significantly different from a claim in which the preamble says "A game". That is, a pinball game "implies" that everything, including the microprocessor control, is within the game cabinet. As of this date the PTO as represented by the Examiner has accepted that argument and position. As a matter of law it is incorrect.

In Borg-Warner Corporation v. Mall Tool Company, 217 F.2d 850 (7 Cir. 1954) the claims at issue included claims 9, 10, 13 and 14 which recited either a sawtooth or a saw having a particular kind of tooth. The Trial Court held that these claims were anticipated by certain prior art. On appeal it was argued that the claims had to be read in connection with the specification and description, and since that discussed only chain saws the claims were to be limited to chain saws. At 217 F.2d, page 855, that argument was rejected. The Court held that the claim alone measures the grant to the patentee and when they overclaim the invention to the point of invalidity and are free from ambiguity the specification cannot be referenced to save them. As the Court said at page 856 it could not: "limit

the plain words of the claim to something less than what existed before".

In this case Bally seeks precisely that. They are attempting to limit the plain words of the claims to something less than what existed before. A pinball game is nonetheless a pinball game because its control elements are external to the game cabinet and connected to it by an electrical cable. That which is not patentable invention in the first instance does not become patentable invention when the word "pinball" is inserted into the patent claim. If the prior art device was a pinball game before and anticipated the claim, it remains a pinball game even when the word "pinball" appears in a claim and still anticipates the claim.

In Borg-Warner the Court expressly followed the decision in Graver Mfg. Co. v. Linde Co., 336 U.S. 271 (1949). At page 277 the Supreme Court said that it is the claims which measure the grant and when they do so to the point of invalidity and are free from ambiguity the specification cannot be resorted to to save them. Thus, no matter that the specification of the patent in suit speaks of the micro-processor control as being in the game cabinet, if the patent claims do not say that then claims 40 to 55 are invalid because of the prior Atari work just as are claims 1-39.

As our Court of Appeals said in Super Products Corp. v. D P Way Corp., 546 F.2d 748, 756 (7 Cir. 1976), the courts are without power to rewrite the claims of a patent. To the same effect is Standard Coil Products Co. v. General Electric Company, 306 F.2d 319 (2 Cir. 1962), Philips Industries, Inc. v. State Stove & Mfg. Co., Inc., 522 F.2d 1137 (6 Cir. 1975) and Noll v. O. M. Scott & Sons Co., 467 F.2d 295 (6 Cir. 1972).

The law of the matter is clear. Claims cannot be rewritten to include limitations from the specification but not appearing therein to save them from invalidity. This is precisely what Bally attempts to do when it seeks to have the word "pinball" construed to mean a unitary structure housing the game and the microprocessor control function. Claims 40-55 cannot be so read and they too are admittedly invalid because of the prior Atari work.

Conclusion

Bally has admitted, by amending claims 1 through 39 of the patent in suit and arguing albeit incorrectly that claims 40 through 55 inferentially include a cabinet or housing, that the PTO was correct when it held the work of Atari to be prior art under the provisions of 35 U.S.C. § 102(g). It cannot now contend that there are any genuine issues of material fact as to this aspect of the matter.

Therefore, defendants are entitled to a judgment dismissing the complaint in this action as a matter of law.

Respectfully submitted,

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[54] **PLAYER OPERATED GAME APPARATUS**[75] **Inventors:** David J. Nutting; Jeffrey E. Frederiksen, both of Milwaukee, Wis.[73] **Assignee:** Bally Manufacturing Corporation, Chicago, Ill.[21] **Appl. No.:** 576,980[22] **Filed:** May 13, 1975[51] **Int. Cl.²** A63F 7/00[52] **U.S. Cl.** 273/121 A[58] **Field of Search** 273/1 E, 85 R, 54 C, 273/118 A, 119 A, 121 A, 122 A, 125 A, 126 A, DIG. 28; 235/1 B, 92 GA, 156; 179/15 AL; 340/172.5, 323, 337; 445/1[56] **References Cited****U.S. PATENT DOCUMENTS**

2,479,707	8/1949	Durant	273/121 A
2,806,701	9/1957	Durant	273/125 A
3,703,288	11/1972	Vogel et al.	273/126 A
3,809,395	5/1974	Allison et al.	273/1 E
3,874,669	4/1975	Ariano	273/85 R
3,889,956	6/1975	Castle	273/1 E X
3,907,290	9/1975	Fischer et al.	235/92 GA
4,008,893	2/1977	Yoscliff	273/85 R

4,026,555 5/1977 Kirschner et al. 273/85 R

OTHER PUBLICATIONS

Balley Alley Service Manual; Balley Manufacturing Corp.; Jan., 1978.

Popular Electronics; "Altair 8800," Jan. 1975; pp. 33-38.

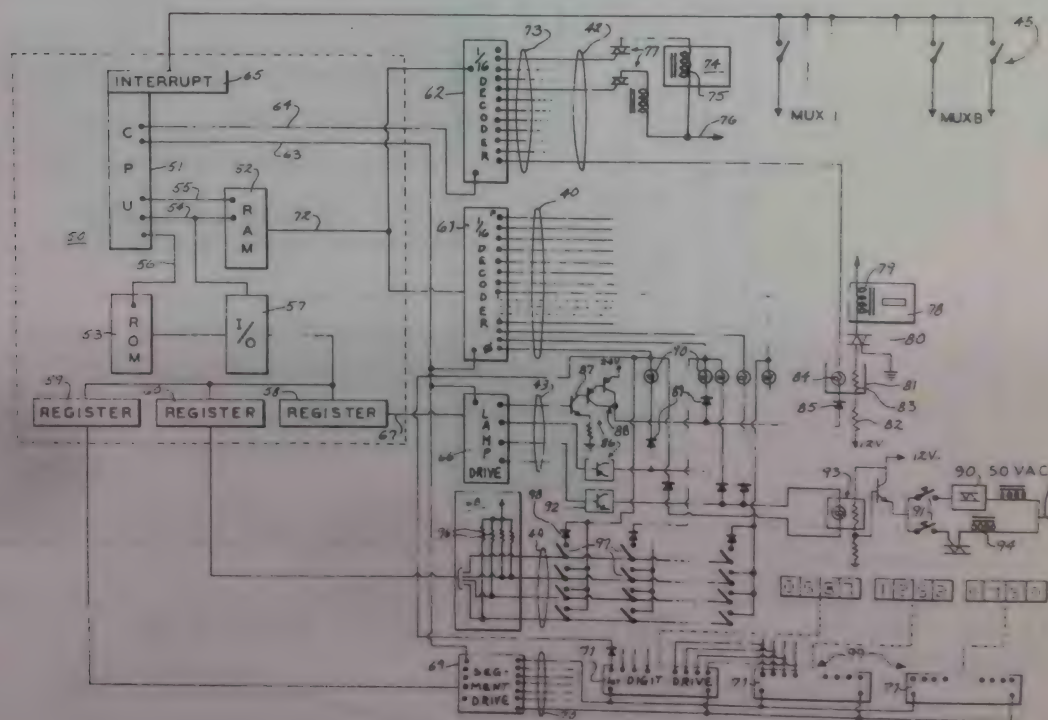
Popular Science; "Games Computers Play," vol. 197, No. 4; Oct., 1970; p. 44.

Primary Examiner—Richard C. Pinkham*Assistant Examiner*—Vance Y. Hum*Attorney, Agent, or Firm*—Fitch, Even, Tabin & Luedeka

[57]

ABSTRACT

A pinball game has a playing field with ball directing lanes and targets and flipper elements for returning the ball. A programmed logic array is connected to the switches, response lamps, digit scoring lamps, and audible devices. A matrix circuit is connected to the switches and places information into a memory, the output of which is connected through to activate lamps and audible devices which produce a continuous output if energized. A scanning decoder coupled to the matrix circuit is driven from the programmed logic array.

55 Claims, 5 Drawing Figures

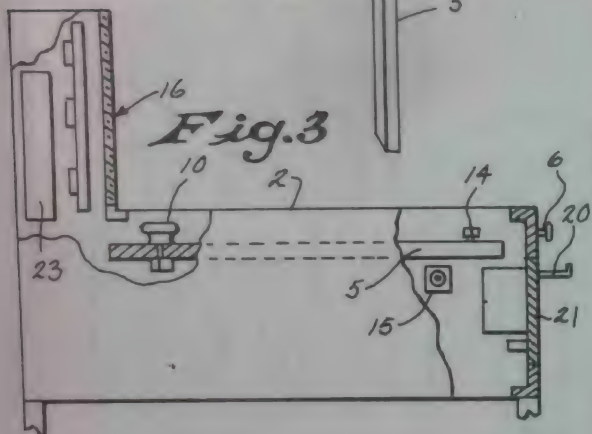
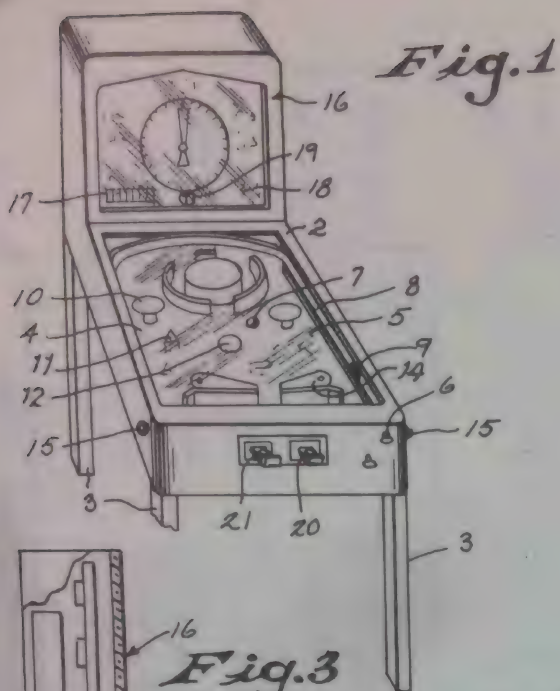
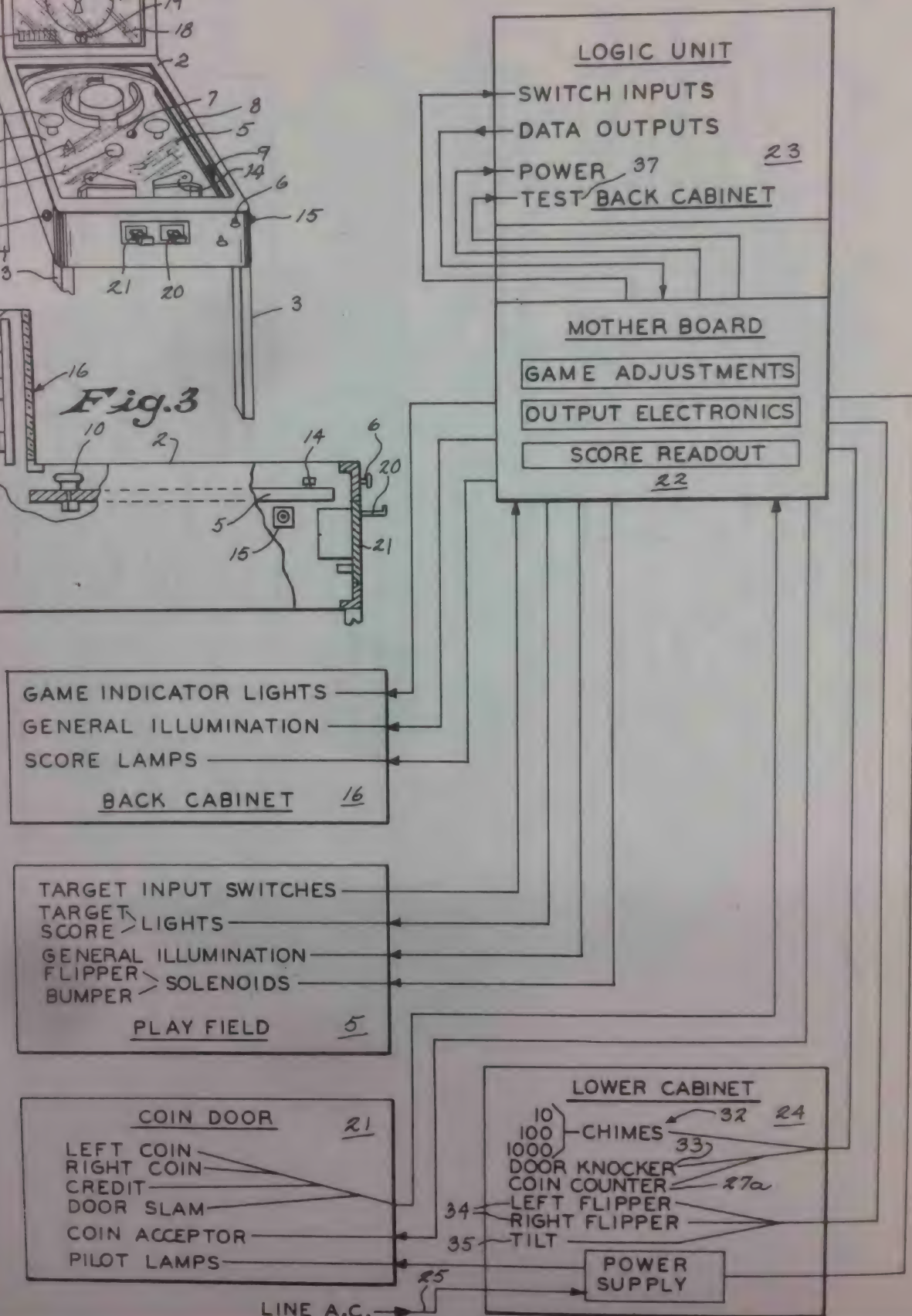
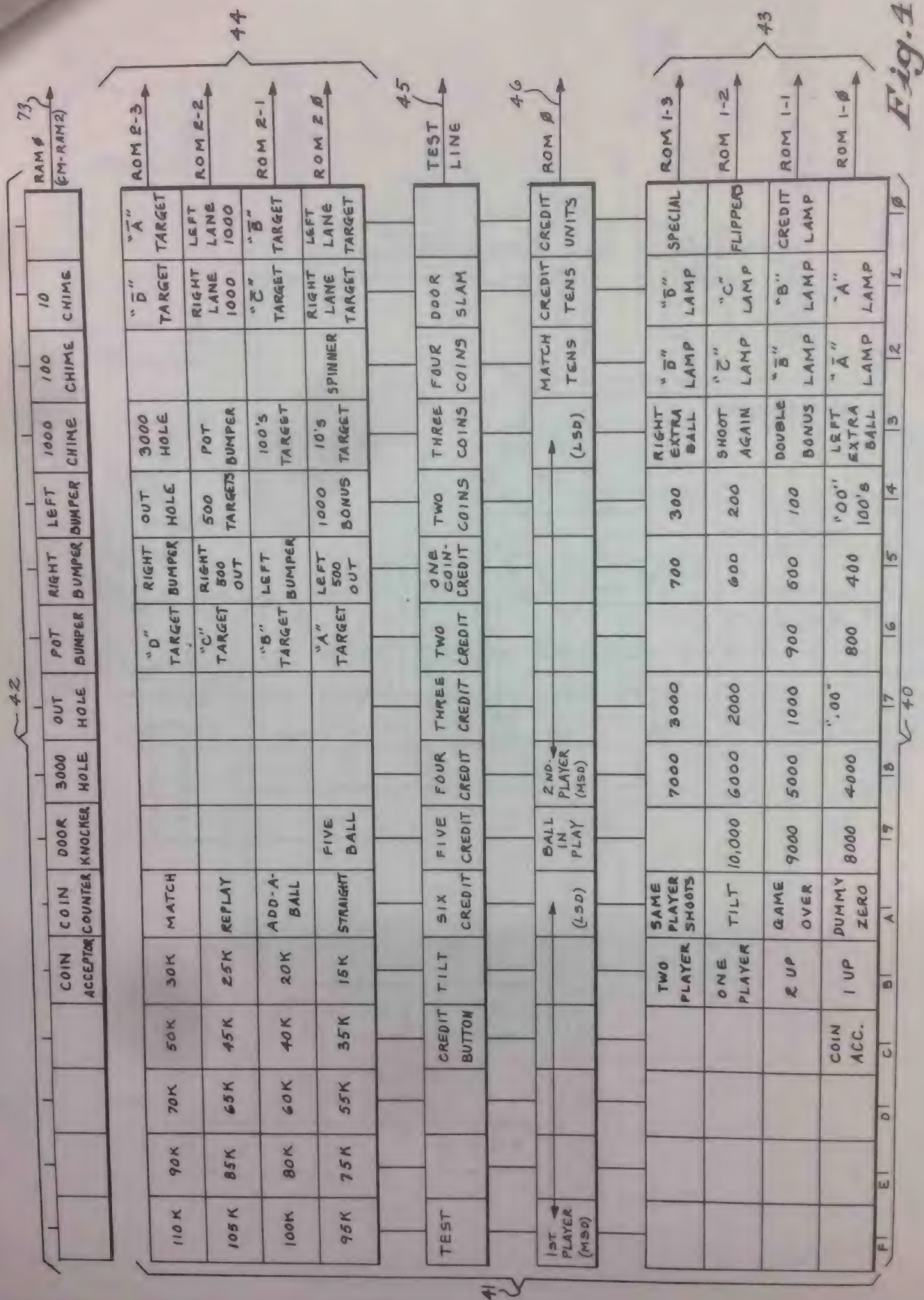


Fig. 2





This is a reissue application of Nutting et al. Patent No. 4,093,232, filed May 13, 1975 and issued June 6, 1978. The instant patent is presently being litigated in the U. S. District Court for the Northern District of Illinois as Civil Action Nos. 78C2246 and 79 C 713. Various parties have filed documents in support of or in opposition to this reissue application and are identified as follows: Bally Manufacturing Corporation (Patentee), D. Gottlieb & Co., (alleged infringer), Williams Electronics, Inc., (alleged infringer), Rockwell International Corporation (alleged infringer), Game Plan Incorporated (alleged infringer) and Astro Games, Inc. (alleged infringer). The procedure by which the above noted documents were authorized to be filed is set forth in the decision by the Assistant Commissioner for Patents on August 29, September 12, October 17 of 1979 (Paper Nos. 7, 9 and 21). This procedure is justified by the decision set forth in International Paper Co. v. Fibreboard Corp., 181 USPQ 740.

The more pertinent new art submitted by all of the parties and their comments relating thereto as applied to the claims have been considered and discussed infra.

The ensuing discussion will begin with an evaluation of the references mentioned in the reissue oath/declaration and will then proceed to the ancillary teachings relied on by each of the protestors. Where a duplication of effort by any of the parties exists, tacit acknowledgement of the respective reference suppliers will be considered to have been made with respect to each showing.

The MCS-4 Micro Computer Set Users Manual mentioned in the Reissue Declaration (also Ref. 1 of Paper No. 4 1/2) discloses a systems manual for informing a prospective user of the available features contained therein. It is directed to those skilled in microcomputers in general but does not show specific controller applications or how such a system could be used to replace the electromechanical logic of a surface projectile pinball machine. Though this reference has some material bearing on the obviousness issue as explained infra, it would certainly not contain any anticipatory (under 35 USC 102) material.

The Electronics article of October 25, 1973 (Exhibit F-2 of Paper No. 4) presents a glowing account of solid state implementation in a number of commercial devices, e.g., watches, calculators, etc., for present as well as future application. A substantial portion of the article is devoted to the various technologies involved

in making large scale integration (LSI) and microprocessor (MPU) chips ranging from metallic-oxide-semiconductors (MOS), complementary MOS (CMOS), bipolar LSI, integrated injection logic (I²L), charge coupled devices (CCD) to silicon on sapphire (SOS) processes. As a newly emerging technology, microprocessor useage in the electronics industry for "electronic cash registers . . . process controllers, pinball machines, . . . medical instruments, traffic controllers, . . . "etc., (emphasis supplied) with future applications in ". . . appliances, television game systems and the like" (page 98) is becoming very successful. Although this article does suggest the concept of employing microcomputers in the amusement art, in particular, to pinball machines, there is no specific showing as to how such can be attained. For instance, the hardware/software relationship for interfacing a microprocessor (MPU) to the pinball mechanics in this article has not been demonstrated sufficiently to enable this article to establish a prima facie case of obviousness against the specific feature of the reissued c.aims. On a suggestion of intent is found in this teaching plus a broad inference pertaining to the level of skill in this art.

The Electronics article of March 1, 1973, Exhibit F-3 of Paper No. 4, presents applications to which a number of existing devices may be applied. Among the listed uses is implementation in pinball machines as a means of introducing microprocessors (MPU) to the mass market in order to downwardly influence the cost of individual chip sets. While this showing serves merely to indicate a general recognition in this art of MPU technology in pinball apparatus, this article lacks the features necessary to anticipate (under 35 USC 102) or make obvious the structural combination specifically defined by the claims in the reissue application. However, as noted in the preceding paragraph, this teaching is illustrative of the level of skill in this art and suggestive of the possibility of use in this art.

The EE/Systems Engineering Today article dated November 1973 (Exhibit D-1 of Paper No. 4) discloses that with the advent of solid state electronics in the arcade industry significant advances in expansion of the playing capability of such games became evident. The first area to structurally realize the solid state potential was the simulated game discipline. These games encompassed the video game technology

and developed a substantial following by offering practitioners in this art the opportunity to experiment with the software/hardware potential. Various physical parameters (e.g. motion equations, etc.) could be simulated in real-time via the Program. The effects thereof along with a player's interactive manipulations could, then, be graphically generated on the video display.

Devices of this nature when compared to existing pinball apparatus were considered to be highly successful. However, as to the incorporation of solid state devices in surface projectile pinball machines, a different attitude prevailed and such advances were not as well received. Evidently the pinball industry was a divergent but well established industry with problems different from those encountered in the burgeoning simulated game area. Even so, this article indicates that updating pinball devices with solid state technology had been considered but was deemed economically impractical.

The Electronic Design article of April 12, 1973 (Exhibit D3 of Paper No. 4) merely teaches multiplexing (MUX) techniques allied with analog-to-digital conversion (ADC) as a means to interface the real-world environment to the computer. There is no indication in this article as to the relevancy of muxing and ADC techniques to the pinball discipline and the article would appear to be immaterial to the obviousness issue of the claims in the reissued application.

The Process Instruments and Controls Handbook dated 1957 identified as Exhibit D4 in Paper No. 4 is devoted to electronic scanning techniques for measurements, data recording and/or process control. No pinball applications have been mentioned, only uses as pressure, level, temperature, flow sensing or product inspection for the chemical, atomic energy and petroleum refining and manufacturing industries. Thus, this reference would not appear to have any material bearing on the question of obviousness of the claimed invention.

The Bally Alley Service Manual, was cited as prior art in the original patent and has been employed by protestors in Paper No. 4 1/2 as evidence of obviousness under 35 USC 103. This arcade bowling game is a microprocessor-controlled, discrete display simulated bowling game and is analogous to the type of games exemplified by Ariano et al., Yoseloff and Kirschner et al. (all of record in the patent) as distinguished from the surface projectile game of the instant invention. These simulated games including Bally Alley are concerned with the simulated effects of a game projectile, the reaction of this projectile to various physical conditions and the display thereof on a viewing screen (of the discrete or cathode ray variety). There is no substantial difference between the Bally Alley game and the other prior art simulators. For instance Ariano teaches "pinball" simulation with stored programs capability A5 on a discrete (figure 2) or cathode ray playfield (figure 3). Yoseloff illustrates a solid state version of Bally Alley without the need for a microprocessor while Kirschner discloses a microprocessor based video game with memory storage and MUX capability for simulating a surface projectile game similar to Bally Alley. The simulated game art is a divergent branch of the amusement discipline which encompasses both the actual projectile (e.g. Fischer et al., Durant, etc., both cited in the patent) and the simulated projectile (discussed supra) areas. Therefore, absent any teaching to surface projectiles or pinball implementation (as recognized by protestors in the last five lines on page 20 of Paper No. 4 1/2), this publication would not have made obvious the claimed invention.

The Motorola Monitor dated December 1973 (exhibit 10 in Volume 1 of Paper No. 11) discusses the computerization process of today's industries but lacks material discussion on the amusement industry, in particular pinball.

The "Potential Impact of Microprocessor Technology" article of December 1974 (Exhibit 11 in Volume 1 of Paper No. 11) is simply a marketing forecast report and would have no effect on the claimed invention.

The Minicomputers and Microcomputers publication of 1974 (Exhibit 12 of Volume 1 of Paper No. 11) is an applications report on various MPU mainframes but does not have any effect on the claimed invention.

The Electronics article of June 27, 1974 (Exhibit 13 in Volume 1 of Paper No. 11) presents simulated game technology as a new field as opposed to the more established arcade industry and is considered to be at best cumulative.

Exhibit 14 in Volume 1 of Paper No. 11 is devoted to microprocessor controlled pinball but lacks a date and a publication title. Therefore, it's inclusion is seen as of little value, because it is not legally competent as a reference.

Electronics, July 11, 1974 (Exhibit 15 in Volume 1 of Paper No. 11) refers to the microprocessor based simulated game, Bally Alley, referred to above and is considered to be no more than cumulative.

The Electronics article of March 21, 1974 (Exhibit 6 in Volume 1 of Paper No. 11) cursorily states that microprocessors could have been used in pinball machines but gives no specifics as to how this could have been done. This teaching is only cumulative to the above discussed Electronics article of March 1, 1973 and would not have a material bearing on the claimed invention.

The "Programmable Logic Controllers-Painless Programming to Replace the Relay Bank" report dated April 1971 (Exhibit 8 of Paper No. 11) broadly discusses programmable logic controller applications without any reference to pinball applications. It is not considered material to the claimed invention.

The Application Notes-Parallel Processing System of 1972 (Exhibit 9 of Volume 1 of Paper No. 11) discloses the hardware aspects of calculators, cash registers, terminals, etc., but lacks any enlightenment on pinball implementation.

Patent 4,087,855 issued May 2, 1978 (Exhibit 32 of Volume II of Paper No. 11) is directed to a memory address and peripheral unit system for a microcomputer but lacks any teaching for implementation in a pinball machine and is considered to be state-of-the art teaching for the electronic discipline.

The Fairchild TTL Applications Handbook, dated August 1973 of Exhibit 37 of Volume II of Paper No. 11 presents multiplexed display applications but does not indicate implementation in pinball devices and is considered to teach the state-of-the art in electronics.

French patent 2,038,597 allowed December 28, 1970, Exhibit 38 of Volume II of Paper No. 11 illustrates discrete electronics components (transistors, diodes) to replace some electromechanical elements and to replace some electromechanical elements and to switch counters for scoring, ball use, credits, etc. However, this teaching does not show the aspects of computerizing or multiplexing such a game and would not render unpatentable the particular features set forth in the reissue claims.

The Application Notes dated April 1972, Exhibit 48 in Volume II of Paper No. 11 simply illustrates a general solid state timer-controller-sequencer and is considered to be a teaching of the state-of-the art in electronics.

Patent 3,715,746 issued February 6, 1973, reference 10 of Paper No. 10 is drawn to a keyboard input with matrixed seven segment displays for calculators and would not appear to have any bearing on the computerized pinball game of the featured claims.

All of the various depositions and Exhibits have been carefully evaluated. Those deemed significantly pertinent have been relied on by the Examiner for the facts contained therein and have been identified in the text of the rejections, infra.

Claims 1-9, 11-27 and 29-55 are rejected under 35 USC 102(a) since the invention was known or used by others in this country before the invention thereof by applicant for patent as evidenced by Steven T. Mayer's deposition appearing in the Attachment to Exhibits 50 and 51, Vol. IV, of Paper No. 11 of the Rockwell Protest as supported to a certain extent by Volume 1 of the same attachment. In making this rejection the Examiner is cognizant of the fact that applicants have represented in Paper No. 6, filed August 17, 1979, that

"Applicants' attorneys attended those depositions and cross-examined the witnesses . . . In the event that the . . . Office desires to have copies of the documents and/or deposition transcripts relating to these issues raised by the protesters, applicants will file all such material which they possess upon request of the Office."
(Page 3, Paper No. 6).

The Examiner has reviewed in detail the Mayer deposition and has weighed the testimony given by Mayer. The Examiner has noted that applicants were represented by competent Counsel at said deposition and also that applicants have not represented that they did not have an opportunity to examine Mayer or that their examination was somehow incomplete. Presumably, applicants have submitted any relevant portions of their examination of Mayer. After weighing the testimony given by Mayer the Examiner concludes that the following has been established. Prior to the filing of an application for patent by reissue applicant

May 13, 1975 of Patent No. 4,093,222), a microprocessor (MPU) controlled pinball machine having a multiplexed display (pages 183-187 of the deposition) embodying the claimed features was developed by Atari and Cyan Engineering. A simulated mock-up was successfully produced around May-June of 1974 and an operable self contained MPU based version was located at a public facility (Frank's Pizza Parlor) for coin operation around December 1974 and January 1975. All of these actions occurred before the filing date May 13, 1975.

With regard to the voltage rating claims (9, 44, 48), the obviousness thereof appears in vellum Exhibits GD 5 and 56 of Rockwell's Paper No. 11 (referred to in Pages 38 and 120 of the Mayer disposition) in connection with an El Toro pinball machine.

Claims 1-9, 11-27 and 29-55 are rejected under 35 USC 102(g) as having been made in this country before the applicant's invention by another who had not abandoned, suppressed, or concealed it. The comments made above relating to applicants' representation by competent counsel apply equally to this rejection. This "other" referred to above has been identified as the third party witness. Atari; reliance being made to Steven Mayer's Deposition, Volume IV in Paper No. 11 of the Rockwell Protest and Bristow's Deposition in Volume II, Attachments to Exhibits 50 and 51, Volumes I and IV, of the same paper. Mayer's deposition reveals that Atari in conjunction with Cyan Engineering was developing in California a computer based (Intel 4004) pinball game by at least February of 1974; refer to Exhibit GS-9 of Paper No. 4 1/2 and Volume 1 of Attachments to Exhibits 50 and 51 of Paper No. 11. Between April 5-11, 1974 a mock-up¹ version was well under way and by May 17, 1974 checkout of the finished mock-up version was well under way and by May 17, 1974 checkout of the finished mock-up version quality commenced. By June 4, 1974 feasibility based on the completed mock-up was proven and production of a prototype² commenced. Then by December 1974 to January 1975, the fully developed self-contained prototype was placed in a public facility (Frank's Pizza Parlor) for public use; see page 196 of Mayer's Deposition.

¹The term mock-up denotes a "model built to scale" for testing a new machine and need not be of commercial quality. The American College Dictionary, published by Random House, 1970 ed.

²The term prototype denotes "the original or model after which anything is formed" and may be of commercial quality. The American College Dictionary, published by Random House, 1970 ed.

There does not appear to be any attempt by Atari to maintain the secrecy necessary to sustain a suppression or concealment argument. So it would have appeared that Atari had no intention of abandoning, suppressing or concealing the MPU controlled pinball that they had developed. This belief is further supported by the Volume II Attachments to Exhibits 50 and 51 concerning the Bristow deposition and by statements made on page 388 of Mayer's Volume IV deposition. Considering the former, beginning on page 66 of the Bristow deposition, reference was made to a demonstration of the finished mock-up version at a MOA show in Chicago around the October-November 1974 time frame. This page and the ensuing statements would have indicated that Atari had no intention of concealing or suppressing or abandoning their work. Moreover, the comments of Mayer on page 388 of his deposition would appear to have justified the Examiner's belief that Atari was not concerned with maintaining secrecy of their device. Thus, Atari's 102(g) prior invention being identical to applicant's claimed invention would have constituted prior art for the purpose of barring applicant from obtaining a patent to the same invention; refer to Ex parte Robbins and Porter, 156 USPQ 707, at 709. This case is in contradistinction to applicant's objection (page 3 of Paper No. 13) to the use of §102(g) when no interference is evident. Also of note is Continental Copper and Steel Industries, Inc. v. New York Wire Company, 196 USPQ 30, at pages 36-37.

Reference should be made also to In re Bass et al., 177 USPQ 178 at 183. As noted by Judge Rich "This is by no means the first time we have passed on whether §102(g) prior invention of another is prior art . . . However, it is the first time that we have considered combining §102 and §103 in the context of an ex parte rejection entirely divorced from the award of priority . . .". However, in view of the fact that the facts of this case seem to show that the claimed invention is identical to the prior art or invention of Atari, the issue should rest on §102(g) alone; note lines 22-24 in the second column on page 183 of In re Bass et al., supra.

Claims 10 and 28 are rejected under 35 USC 102(a)/103 and 102(g)/103 as being unpatentable over the prior Atari invention which is available as prior art on the basis of §102(a) and §102(g) as disclosed in the Mayer deposition of Paper No. 11, discussed supra. The limitations imposed by these claims would have been an obvious modification of Atari's device. For instance, those ordinarily skilled in this art would have been able to derive the relationship of claim 10 from simple power equations and electrical-mathematical relationships. As for claim 28, the use of power Darlington's as current

...ing drivers is well known to those skilled in this art possessing a basic electronics background.

Claims 1-55 are rejected under 35 USC 103 as being unpatentable over a conventional pinball machine in view of Electronics (March 1, 1973) and the MCS-4 Micro Computer Set Users Manual (hereinafter MCS-4). Electromechanical pinball machines with transducers for sensing the presence of a moving mass (e.g. a ball) on an inclined playing field and recording a score on a plurality of display means (e.g. a seven segment digital display) are old and well known in this art; official notice being taken thereof. Merely updating such conventional devices from the combined teachings of Electronics and MCS-4 would have been obvious to those ordinarily skilled in this art. While Electronics only suggests the possibility of computerizing pinball, it is, nevertheless, a broad indication that such an implementation could have been obvious to those ordinarily skilled in the art. Moreover, such an implication would have established that the level of skill of the ordinary artisan in this art would have included at least an electronic background and possibly a computer background. Although the "computer background" requirement might be arguable, it is clear that by suggesting "computerization" in Electronics those ordinarily skilled even without such esoteric knowledge would have found it obvious to have solicited the aid of one having the requisite background. In re Naquin, 158 USPQ 317. Thus, those so skilled would have been led to the MCS-4 teaching for application of a microprocessor (MPU) to a conventional pinball machine in further view of Electronics' suggestions; refer also to Digitronics Corp., v. New York Racing Assn., 553 F.2d 740, 193 USPQ 577.

Of further note is the fact that microprocessors are inherently endowed with the capability of operating in a polled or interrupt mode. In view of the slow processing required in a pinball machine as opposed to a high speed real-time simulation system, the MPU could have obviously scanned the output ports sequentially to determine which device needed servicing. And since servicing is dependent primarily on the rolling ball to effect scoring, game strategy, light activation, sound energization, etc., could have been adequately serviced by such a technique thereby accomplishing what is termed cyclical multiplexing.

As further indication of obviousness, it is noted that at least three separate parties other than applicant's were in the process of developing MPU controlled pinball games. The evidence indicative of obviousness identified as 1(b) in the paragraph bridging pages 2 and 3 of Paper No. 11 (Rockwell protest) has been accepted by the examiner. This indication of obviousness is further supported by the fact that

number of individuals . . ." is ". . . sometimes indicative of obviousness.", see Leesona Corp. v. United States; 185 USPQ 114; Del Mar Engineering Laboratories v. United States, 186 USPQ 42; Westwood Chemical, Inc., v. Dow Corning Corp., 189 USPQ 649; Lerner v. Child Guidance Products, Inc., 189 USPQ 83; and Kaz Manufacturing Co., Inc., v. Northern Electric Co., 189 USPQ 464.

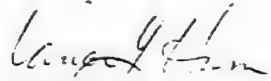
The material objected to by applicant in Paper No. 18 as being of a confidential nature has been reviewed by the Examiner. It is the Examiner's position that certain portions of the submitted information are material. The Examiner has adopted option (4) as proposed by the Assistant Commissioner for Patents at the bottom of page 4 of Paper No. 21.

In regard to the issues enumerated on page 2 of Paper No. 7, the Examiner does not find issues (1) and (3) persuasive and has, therefore, not adopted the same. However, in regard to the second issue based on §102(g), the Examiner has decided that this issue merits consideration as discussed supra.

All parties involved in these proceedings are urged to reply as soon as possible in view of the court imposed two month stay.

A one month shortened statutory period for response to this Office action is set to run from the mailing date stamped on this letter. Refer to 977 O.G. 11 on December 12, 1978; also Item No. 67 in the Consolidated Listing of Recent Official Gazette Notices dated January 2, 1979.

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DIRECTOR'S OFFICE
GROUP 330

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This communication is in response to Paper Nos. 49, 58 and 59 submitted by reissue applicant. Of note are the 14 papers (Paper Nos. 47-60) filed by the various parties concerned with this protested reissue litigation proceeding. Receipt of original Letters Patent No. 4,093,232 and the supplemental Reissue Declaration is acknowledged (Paper No. 49, attachment).

Protestors' extensive position papers (Paper Nos. 56, 57 and 60) have been admitted to the record and have been carefully weighed; points made therein would appear to warrant some merit. Accordingly, the instant reissue application has been reconsidered, and the examiner is of the opinion that certain areas of concern have not been satisfactorily resolved. Issues relating to 35 USC §§ 102(g), 102(g)/103 and 103 and the concomittant reasons for adopting or withdrawing these issues appear in the ensuing action.

Claims 1-9, 11-27 and 29-55 are rejected under 35 USC 102(g) as having been made in this country before the applicants' invention by another (Atari) who had not abandoned, suppressed or concealed it. In particular, the device conceived in late 1973 and developed during the May-June period of 1974 having an Intellect computer externally cabled to a modified pinball machine is believed to constitute a reduction to practice of the machine featured in the claims presently at issue. Moreover, a combined microcomputer-pinball machine embodying the teachings of that device was demonstrated in public at the MOA show in Chicago around October-November of 1974. Note the paragraph dealing with § 102(g) discussed on pages 8 and 9 of the first office action (Paper No. 24)..

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Applicants' arguments have been carefully considered in light of the claimed limitations, weighed against the evidence of record and evaluated with Protestors' comments in mind and have not been deemed entirely persuasive. In resurrecting the 35 USC 102(g) issue, the parties involved in this proceeding are directed to pages 9-12 of the second Office action, Paper No. 46 which are being incorporated by reference. Only the facts regarding the reduction to practice argument need to be revised. The examiner is now of the opinion that the May-June (1974) El Toro implementation was sufficiently developed to be characterized as an operational device, albeit non-commercial. See footnote 7 and page 8 of the second Office action, Paper No. 46. Nowhere do the claims require a self contained or unitary structure housing the pinball and microprocessor control functions. And as a result, the instant claims would have been interpretable on the functional El Toro pinball externally cabled to an Intellect 4 microcomputer. While the case law cited on pages 10-12 of Paper No. 46 is relevant to the facts presently under consideration, the decision rendered in Dunlop Holdings Ltd. V. Ram Golf Corp., 524 F. 2d 33, 188 USPQ 481 (7th Cir. 1975) is particularly persuasive on the topic in question. There, the controversy revolving around 35 USC 102(g) whereby the defendant (appellee) developed a golf ball cover formula considered suitable for commercialization before the critical date established by the plaintiff (appellant-patentee). Also before the critical

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date, samples of the defendant's golf balls were distributed to members of the public. The defendant did not, however, disclose the composition of his invention and he continued experimentation after deciding to commercialize his discovery. The court recognized that the claims of the patent were (at page 483)

[B]road enough to encompass any golf ball cover made principally of surlyn.

Despite the fact that there was noninforming public use, the court felt that the defendant was not concealing or suppressing his discovery nor was abandonment at issue since reduction to practice and public use had occurred.

Under the present circumstances, the El Toro reduction to practice occurred before the critical date (September 26, 1974). Public disclosure of the subject invention happened at the MOA exhibition in October-November of 1974. These factors would have forestalled any notion as to suppression, concealment or abandonment when viewed in light of the Dunlop Holdings case supra. ¹

¹ Cf. National Tractor Pullers Assn. Inc. V. Watkins, 205 USPQ 892, 910 (DC Nill 1979) (to qualify as § 102(g) prior art, "there must be proven, by clear and convincing evidence, complete conception of a buildable and operative device, diligence to reduction to practice of the device, identification between the alleged prior art device and the claimed construction and lack of abandonment, and suppression or concealment by the claimed prior inventor.).

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The examiner has noted that reissue applicants have argued the merits of the disclosure and not the substance of the claims. Since the instant claims (i.e., 1, 40, 45 and 52) have been noted to be sufficiently broad to be interpretable on the El Toro non-unitary structure, if the following language was adopted in all of the above claims (claim 1 being merely exemplary) then the claims would avoid the § 102(g) ground of rejection. MPEP 707.07(j).

Claim 1, line 1, after ":", -- a game housing is recommended for insertions;

Claim 1, line 6, after "projectile" but before";"
-- , said surface being contained in said housing -- is recommended for insertion;

Claim 1, line 7, after "means" but before "for",
-- operably mounted on said housing-- is recommended for insertion;

Claim 1, line 13, after "means" but before "for",
-- connected to said game housing -- is recommended for insertion; and

Claim 1, last line, after "memory means" but before
-- , and wherein said processor, response means and multiplexing means are contained in said housing -- is recommended for insertion.

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Reissue applicants may incorporate language to their liking if they are not satisfied with the proposed changes as long as the same concept is conveyed. Any deviation from the proposed addition should not be so broad as to be construed on a number of elements cabled to a pinball machine and scattered about a game room since the game room in this instance could be interpreted to be within the context of a game housing.

Mindful of the aforementioned suggestions and the issue centering around § 102(g)/103, the question narrows as to whether integrating the microcomputer and pinball machine would have simply been an obvious expedient to the ordinary artisan. At first blush, it would have seemed obvious to have developed a unitary structure since that would have been the normal goal. But upon close evaluation of the submitted evidence, the examiner finds to the contrary.

Obviousness whether directed to the § 102(g)/103 issue, mentioned supra, or to the outstanding simultaneous invention issue is the same in both instances, and are, consequently, being treated together. The controlling case for § 103 is still the landmark decision Graham et al V. John Deare Co., et al, 383 U.S.1, 148 USPQ 459 (S. Ct. 1966) ² The level of skill in the non-pinball, electronic game discipline would have apparently been very high. Mattel Inc. V. Hyatt et al, 206 USPQ 499 (DC C Calif. 1979). Magnavox Company V. Chicago Dynamic Industries et al, 201 USPQ 25 (DC Nill 1979).

Digitronic Corp. V. New York Racing Association, Inc.,
53 F. 2d 740, 193 USPQ 577 (2d Cir. 1977). In fact, Atari
and Ramtek could have been viewed as experts in this
discipline. Accordingly, the ordinary artisan would not
have been more successful in electronic game implementation
than the acknowledged experts. Although there is evidence ³
that such experts were not familiar with the pinball area,
they were apparently able to receive some education in this
field. Thus, the only other facts which could have swayed
the balance towards unobviousness would appear to have been
in the secondary consideration treatment of Graham.

The value of an analysis based on secondary factors
is clearly brought out in in re Worrest, 96 USPQ 381 (CCPA 1953).
There the court defined a three part test for obviousness, as
(1) recognition of the problem, (2) concept of the solution,
and (3) implementation of the concept to solution. Admittedly,
the problem was publicly recognized as evidenced by printed
publication as well as the near simultaneous development of
the solution to this problem by more than one party. ⁴

-
2. Refer to PP. 12-13 of the second Office
action, Paper No. 46, a discussion of Graham
with respect to the scope and content of the
prior art and the differences between that
art and the claims.
 3. See footnote 22 in the second Office action, Paper No. 46.
Moreover, the facts of record indicate that

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of the parties involved (Patentee, Atari, Ramtek), one (Ramtek) never completed their project despite substantial evidence that their creation was actually derived from patentee; another (Atari) took three to four years to finalize their product; and yet,

4.

Recently admitted papers, Paper Nos. 49, 56-60 reveal that one of the alleged parties may not have developed their device independently. Applicants have submitted evidence from one Dr. Tai that Ramtek's computerized pinball may have been derived from the Patentee through information acquired by Ray Holt. Protestors have attempted to discredit Dr. Tai's testimony and affidavits by testimony from Ray Holt (Federal Rule 607). Applicants, in turn, have introduced statements and evidence by others (Lemas, etc.) in an attempt to impeach Holt's testimony based on prejudice and interest, faulty recollection, reputation of veracity, etc. Based upon the evidentiary record, the examiner has concluded that:

- (1) Paragraph 10 of Dr. Tai's affidavit (Tai Exhibit 1) is founded upon a statement made by Patentee and is not evidence of actually viewing the claimed combination, Page 42 of the Tai Deposition;
- (2) Dr. Tai's paragraph 10 statement is admissible under the verbal acts admission to Federal Rule 802 since it has been construed as proof that a statement was made by Patentee to affiant;
- (3) Ray Holt's testimony is not sufficiently persuasive to impeach Dr. Tai's testimony when considered in light of other evidentiary materials (Paper No. 49, 58 and 59).
- (4) Sufficient evidence exists to eliminate only Ramtek as one of the parties under the doctrine of simultaneous and contemporaneous invention.

Patentee only required three to four months (from approximately June of 1974 to September of 1974) to complete their invention. When viewed in light of these facts, an inference exists that implementation of the solution might not have been as obvious as one would suppose.

A detailed evaluation of the facts would appear to strengthen any argument in favor of unobviousness. In view of the fact that two of the conceivers could have been termed electronic "experts", that microprocessor applications constituted an "exploding technology", and that the state-of-the art at the time of patentee's September of 1974 reduction to practice was vastly different from Atari's several reductions to practice, the examiner can only conclude that designing a unitary microprocessor based pinball machine may not have been so obvious. More specifically, the longer one experiments in the application of microprocessors, the greater the level of skill possessed and the higher the degree attributable to state-of-the art practices. Notably patentees accomplished the subject invention in a fairly rapid manner (several months) while Atari continued to experiment adding to its store of knowledge, as well as, to the level of the state-of-the art. Ramtek, on the other hand, never developed a product line encompassing a practical, commercial pinball machine. Moreover, taking into consideration, the fact that various competitors of patentees were apprised of patentees' unitary structure by September 26, 1974 or by at least the Chicago MOA Exhibition of 1975 (affidavit of J.E. Frederiksen, Exhibit T in Exhibit Book II of attachments to Paper No. 31), it is entirely plausible that those skilled in

the art could have been assured of the practicality of such an implementation. Such knowledge could, of itself, spur post-solution activity by those other than patentee to final reduction knowing that the subject invention was viable. And so, it would appear that the final reduction to practice by the expert in the dynamic electronic game art (Atari) would appear to have been less significant than in a static art.

The conditions relating to implementation of solution proposed in Worrest and characterized as a secondary consideration in Graham has not been met. The burden of establishing a case of obviousness for rejections based upon 35 USC 102(g)/103 and the doctrine of contemporaneous development has not been successful. And consequently, refusal of the claims on these grounds must fail.

Apropos to Protestor's continued interest in the Bally Alley teaching as prior art under 35 USC 103 (pages 15-16 of Paper No. 46 are incorporated by reference) it is noted that the purpose of this device (page 2 of the Bally Alley Service Manual) has been adequately and clearly set forth. Assuming arguendo that the ordinary practitioner in this art could have been capable of modifying Bally Alley for actual pinball operation, then such would have negated the intended purpose of the game. No evidence or teaching has been presented to justify such a conclusion.

By definition, to simulate is to (1) make pretense of, (2) assume or have the appearance of. The American College Dictionary, published by Random House, 1970 ed. The simulated

game depicted in Bally Alley is to substitute a reasonable facsimile for the original device thereby dispensing with some of the paraphernalia (balls, etc.) associated with the original machine.

It is too easy to claim obviousness after having had the opportunity to review and evaluate applicants' contribution with respect to the prior art. Usually such action would have formed the basis for arguing hindsight reasoning. In the Bally Alley machine, the intended purpose was to provide a substitute or an alternative to a surface projectile game much like other prior art teachings of record. For example, Bally Alley effectuates game simulation through microprocessor control of discrete indicators, Yoseloff employs discrete digital logic for controlling the indicators; and Kirschner teaches microprocessor control of a CRT. These devices are all noticeably similar. To impute that those skilled in this art could have found it obvious to have transformed a simulated surface projectile game to a surface projectile game retaining the hardware control is unfounded and unreasonable. Quoting from the Court, Seventh Circuit, in the National Tractor Pullers case, cited supra, at page 911:

The test of obviousness under 35 USC §, 103 is not whether a prior art device could be modified into something resembling the applicant's structure, but the proper test is whether, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art, given the teachings of the prior art, to make the invention. *Graham V. John Deere*, 383 U.S. 1,148 USPQ 459 (1965). In considering the prior art, prior patents are references only for what they clearly disclose or suggest and it is not proper

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to modify their structures in a manner which is not suggested by prior art. In re Randol and Redford, 425 F. 2d 1268, 165 USPQ 586 (CCPA 1970). A modification of a prior art patent or device which would render that device unworkable for its intended purposes cannot be said to suggest such a modification. Diamond International Corp. V. Walterhoefer, 289; Ex parte Weber, 154 USPQ 49 (P.O. Bd. Ap. 1967).

With these observations in mind, it is the examiner's desire to finally put to rest any further entreatments by Protestors on the application of the Bally Alley teaching.

Applicants are being reminded that any significant change in the status of litigation should be promptly reported to the Patent and Trademark Office. MPEP 1442.04.

All parties in this proceeding are being cautioned that the:

filing of multiple papers by either the applicant and/or protestor(s) with respect to a specific issue is discouraged by the Office since the application file becomes unduly expanded and unnecessary delays in the examination are encountered. Both... should endeavor to make their first submission with regard to a specific issue as complete as possible in order to avoid the necessity to file multiple papers. Any necessary rebuttal to the first submission of another party should also be as complete as possible. Should the Primary Examiner determine that the application file is becoming unduly expanded due to the filing of multiple papers relating to the same issue such that unnecessary delay in the examination process encountered, ... the Group Director ... may... issue a written order limiting the number of papers that each party may file on any single issue during the subsequent prosecution of the

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application. Any submissions filed in violation of the written order will be merely acknowledged, placed in the file, and refused consideration on the merits unless accompanied by a showing of good and sufficient reasons why such a submission is necessary and was not earlier submitted. If such a submission filed in apparent violation of a written order is approved for consideration by the Group Director, it will be so stamped and the parties notified. In particularly aggravated cases, the Group Director may issue a written order refusing to consider papers already filed if the Group Director determines that a multiplicity of papers have been filed relating to the same issue and that the papers contain overlapping or redundant arguments.
MPEP 1901.07 (c), rev. 3, July 1980.

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SUMMARY

The rejection under 35 USC 102(g) has been reinstituted. Any rejection founded on 35 USC 102(g)/103 is not believed to be sustainable. The rejection based upon 35 USC 103 as evidenced by simultaneous invention has been withdrawn.

Any replies to the Examiner's action supra, by either the applicants or the protestors must be hand delivered to the Office of the Group Director (Group 330) on or before one month from the mailing date of this letter.

Applicant is being given one (1) month from the date of this letter to respond to the Office action pursuant to MPEP 1442.03.

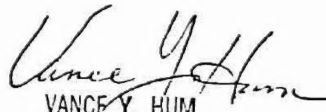
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McGlynn, D.R.; Microprocessors Technology, Architecture and Applications; 1976; pp. 71, 72.

the basic architectures of some Over two dozen microprocessors available today. It would be to describe each of these products in an introductory presentation. It is a review of a few of these microprocessors and their capabilities and architectural details is presented at the end of the chapter. The characteristics of these and other available microprocessors are considered in this chapter are:

MOS single-chip microprocessor that was made available as the Intel 8080 microprocessor, being made available as the Intel 8085 microprocessor that was announced in 1974, and the Intel 8086 in comparison with the later 8088.

The Intel 8086 is shown in Fig. 4.1, and a more detailed description of the functional elements of the 8086 is given in the section below on the 8086.

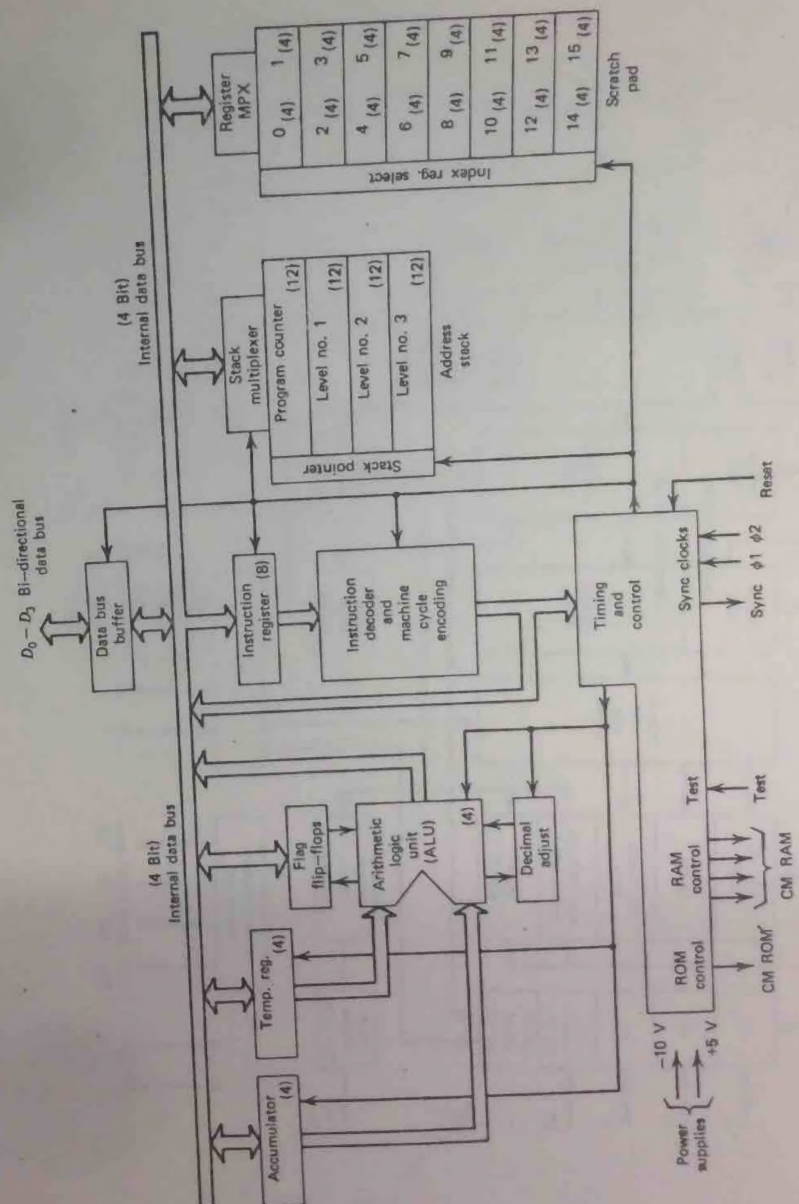


FIGURE 4.1 INTEL 4004 BLOCK DIAGRAM.

Exhibit B

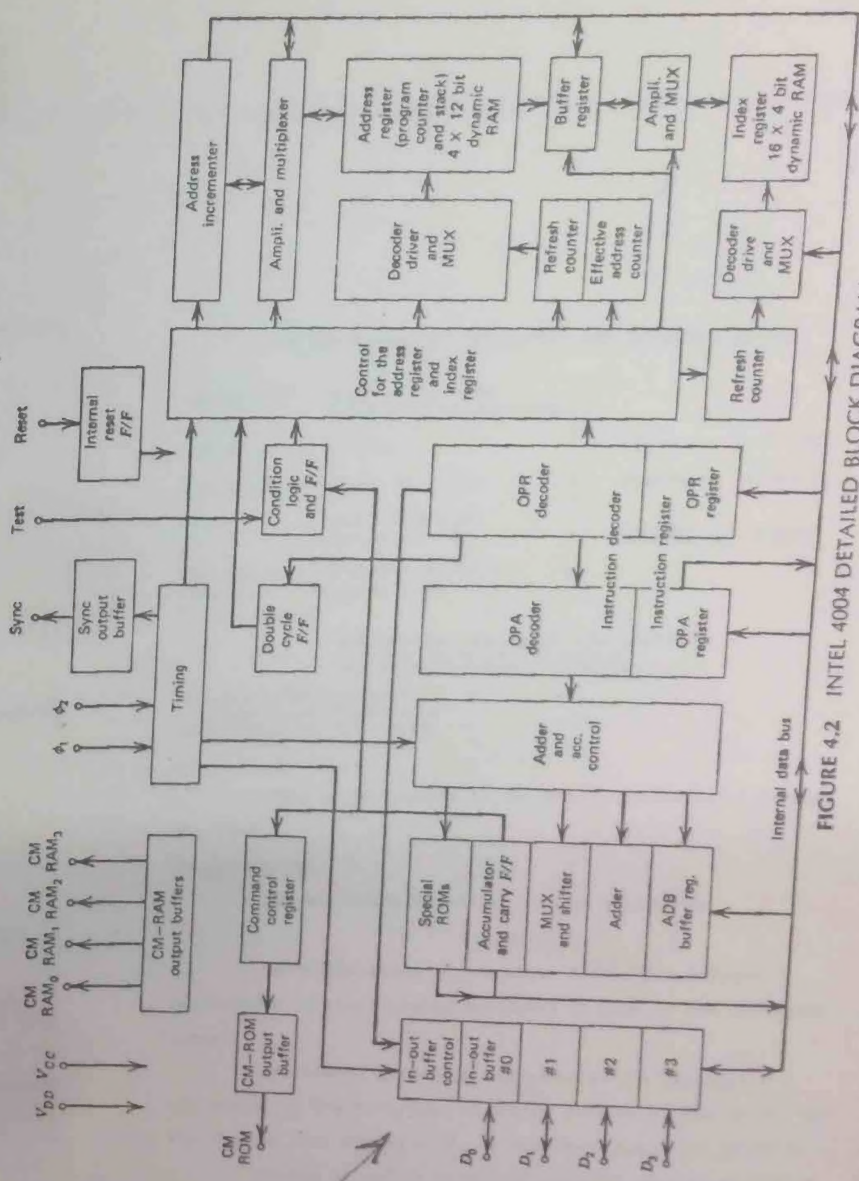


FIGURE 4.2 INTEL 4004 DETAILED BLOCK DIAGRAM.